CLAIM AMENDMENTS

IN THE CLAIMS

This listing of the claims will replace all prior versions, and listing, of claims in the application or previous response to office action:

1-4. (Cancelled).

5. (Currently Amended) A method to reduce the absorption of ultraviolet radiation by the skin of a mammal, the method comprising:

~~providing~~ applying a formulation comprising nucleic acids having one or more R-group substitutions; and a compound selected from the group consisting of phenylalanine, tryptophan, tyrosine, keratin, albumin, collagen, elastin, riboflavin, and ~~retonoic~~ retinoic acid~~,; and~~

~~applying said formulation~~ to the skin of a mammal to reduce the absorption of ultraviolet radiation by the skin of said mammal.

6. (Original) The method of claim 5, wherein the nucleic acids are DNA.

7. (Previously Presented) The method of claim 5, wherein the nucleic acids are DNA of an average size of at least about 100 base pairs.

8. (Original) The method of claim 5, wherein the ultraviolet radiation is UVB radiation.

9. (Previously Presented) The method of claim 5, wherein applying said formulation to said mammal results in a reduction in the amount of ultraviolet radiation absorbed by the skin of said mammal.

10. (Previously Presented) The method of claim 5, wherein applying said formulation to said mammal results in at least about a 90% reduction in the amount of ultraviolet radiation absorbed by the skin of said mammal.

11. (Previously Presented) The method of claim 5, wherein applying said formulation results in at least about a 95% reduction in the amount of ultraviolet radiation absorbed by the skin of said mammal.

12. (Previously Presented) The method of claim 5, wherein applying said formulation results in at least about a 99% reduction in the amount of ultraviolet radiation absorbed by the skin of said mammal.

13. (Previously Presented) The method of claim 5, wherein the ultraviolet radiation absorbed by the skin of the mammal is less than a minimum erythemal dose for the mammal after a one hour exposure to the ultraviolet radiation.

14. (Previously Presented) The method of claim 5, wherein the ultraviolet radiation absorbed by the skin of the mammal is less than a minimum erythemal dose for the mammal after a four hour exposure to the ultraviolet radiation.

15. (Previously Presented) The method of claim 5, wherein the ultraviolet radiation absorbed by the skin of the mammal is less than a minimum erythemal dose for the mammal after an eight hour exposure to the ultraviolet radiation.

16. (Original) The method of claim 5, wherein the mammal is human.

17. (Original) The method of claim 5, wherein the mammal is a dog or a cat.

18-34. (Cancelled).

35. (Currently Amended) The method of claim ~~5~~ 6, wherein the ~~nucleic acids are modified by ethylation, cross linking, ultraviolet induced cross linking, or the formation of thymidine dimers~~ DNA is methylated.

36. (Previously Presented) The method of claim 5, wherein the nucleic acids are less than 100 base pairs.

37. (Previously Presented) The method of claim 5, wherein the nucleic acids are in a cholerestic liquid phase, a lyotropic liquid crystal phase, or a precholesteric phase.

38. (Previously Presented) The method of claim 5, wherein the nucleic acids are single stranded, double stranded, or triple stranded.

39. (Previously Presented) The method of claim 5, wherein the formulation further comprises a compound selected from the group consisting of apurinic acids, purines, and uric acids.

40. (Previously Presented) The method of claim 5, wherein the formulation further comprises a compound selected from the group consisting of water, alcohols, water-soluble alcohols, dimethyl sulfoxide, antifungal agents, antibacterial agents, buffers, perfumes, dyes, aloe, and sorbitols.

41. (Canceled).

42. (Previously Presented) The method of claim 40, wherein the formulation further comprises a buffer and said buffer is selected from the group consisting of phosphate, HEPES, and TRIS.

43-46. (Canceled).

47. (Currently Amended) A method to reduce the absorption of ultraviolet radiation by the skin of a mammal, the method comprising:

~~providing a formulation consisting essentially of nucleic acids, having a greater than 5000 base pairs; and~~

applying ~~the~~ a formulation consisting essentially of DNA of an average size of at least about 10,000 base pairs to the skin of a mammal to reduce the absorption of ultraviolet radiation by the skin of said mammal.

48-52. (Canceled).

53. (Canceled).

54. (Canceled).

55. (Previously Presented) The method of claim 47, wherein the ultraviolet radiation is UVB radiation.

56. (Previously Presented) The method of claim 47, wherein applying said formulation to said mammal results in a reduction in the amount of ultraviolet radiation absorbed by the skin of said mammal.

57. (Previously Presented) The method of claim 47, wherein applying said formulation to said mammal results in at least about a 90% reduction in the amount of ultraviolet radiation absorbed by the skin of said mammal.

58. (Previously Presented) The method of claim 47, wherein applying said formulation results in at least about a 95% reduction in the amount of ultraviolet radiation absorbed by the skin of said mammal.

59. (Previously Presented) The method of claim 47, wherein applying said formulation results in at least about a 99% reduction in the amount of ultraviolet radiation absorbed by the skin of said mammal.

60. (Previously Presented) The method of claim 47, wherein the ultraviolet radiation absorbed by the skin of the mammal is less than a minimum erythemal dose for the mammal after a one hour exposure to the ultraviolet radiation.

61. (Previously Presented) The method of claim 47, wherein the ultraviolet radiation absorbed by the skin of the mammal is less than a minimum erythemal dose for the mammal after a four hour exposure to the ultraviolet radiation.

62. (Previously Presented) The method of claim 47, wherein the ultraviolet radiation absorbed by the skin of the mammal is less than a minimum erythemal dose for the mammal after an eight hour exposure to the ultraviolet radiation.

63. (Previously Presented) The method of claim 47, wherein the mammal is human.

64. (Previously Presented) The method of claim 47, wherein the mammal is a dog or a cat.

65. (Currently Amended) The method of claim 47, wherein the formulation further comprises a compound selected from the group consisting of ~~phenytalnine~~ phenylalanine, tryptophan, tyrosine, keratin, albumin, ~~collogen~~ collagen, elastin, riboflavin, and ~~retonoic~~ retinoic acid.

66. (Currently Amended) The method of claim 47, wherein the ~~nucleic acids are modified by ethylation, cross-linking, ultraviolet-induced cross-linkings, or the formation of thymidinediners~~ DNA is methylated.

67. (Currently Amended) The method of claim 47, wherein the nucleic acids are in a ~~cholerestic~~ cholesteric liquid phase, a lyotropic liquid crystal phase, or a precholesteric phase.

68. (Previously Presented) The method of claim 47, wherein the formulation further comprised a compound selected from the group consisting of apurinic acids, purines, and uric acids.

69. (Currently Amended) The method of claim 47, wherein the formulation further comprises a compound selected from the group consisting of water, alcohols, water-soluble alcohols, dimethyl ~~sultoxide~~ sulfoxide, antifungal agents, antibacterial agents, buffers, perfumes, dyes, aloe, and sorbitols.